

Outfall 002A – TCE Exceedance in April 2019 and Plan of Action

The TCE concentration in the sample from outfall 002A (groundwater infiltration) was 39 ppb this month, compared to a permit limit of 5 ppb.

We believe this exceedance was due to the following:

- Full capture of dry weather flow was not being achieved at the time of sample collection at a recovery flow rate of 44.6 gallons per minute (gpm).

The reason for this conclusion is as follows:

1. The measured flow at Outfall 002A (111 gpm) exceeded the effluent discharge flowrate (81.7 gpm) at the time of sample collection.
 - a. Note: This would result in an estimated overflow rate of 29.5 gpm. However, this exceeds the theoretical overflow rate, calculated by a TCE mass balance, of 22.1 gpm. Therefore, the actual overflow rate at the time of sample collection was likely somewhere between 22 and 30 gpm.
2. It is unlikely that groundwater infiltration occurring between CB-88 and the Outfall 002A sample location would have caused the exceedance. The TCE concentration of the closest overburden well in December 2018 (OW-3) was 6.2 ppb. Using this concentration in a TCE mass balance calculation, the groundwater infiltration flow rate would have had to be over 600 gpm. This is an unrealistically high flow rate for groundwater infiltration at this location.

The following corrective action(s) are planned:

1. AECOM is exploring the option of moving the level transmitter from the pump chamber to CB-87R. This will allow us to more definitively conclude whether flow is or isn't going over the baffle at any given time and control the speed of the recovery pumps based on the water level in CB-87R instead of the pump chamber.
 - a. The height of water measured in the pump chamber at the time of 002A sample collection (8:08 AM on 4/19/2019) was 3.956 ft-bgs which is approximately 0.4 inches below the top of the baffle in CB-87R and had been below the baffle wall height (estimated to be 3.92 ft bgs) for approximately four days. Given that the flowrate measured at Outfall 002A exceeded the effluent discharge flowrate at the time of sample collection it is likely that the water level in CB-87R is not equal to the water level in the pump chamber.
2. We will maintain the increased recovery flow rate of the overburden and storm sewer systems to reduce the amount of overburden infiltration into the storm sewer which will reduce the dry weather flow and, under normal conditions, allow dry conditions on the downstream side of the baffle to be maintained at the design maximum vault recovery rate.